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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/031,759 | 05/03/2002 | Ji-Hwan Pack | 073226.0104 | 8336 |
| 38485 | 7590 | 07/27/2005 | EXAMINER | |
| ARENT FOX PLLC 1675 BROADWAY NEW YORK, NY 10019 | | | DUONG, THANH P | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1764 | |

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,759

Applicant(s)

PACK, JI-HWAN

Examiner

Tom P. Duong

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5/6/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's remarks and amendments filed on May 6, 2005 have been carefully considered. Claim 1 has been amended. Claim 4 has been canceled. Claims 10-13 have been withdrawn from consideration. Claims 1-3 and 5-9 are pending in this application.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on May 6, 2005 is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (5,967,771) in view of Inuki et al. (6,298,877). Regarding claim 1, Chen discloses a regenerative oxidizer (10), for removal of pollutants from waste gas (Col. 3, lines 6-12) comprising: an elongated housing (12) having an inlet duct (32) and an outlet duct (34); a heat media bed (54 and Col. 6, lines 32-35) disposed circumferentially within the housing (12); a combustion chamber (16) equipped with a burner or electric heater (18); a distribution cylinder (38) disposed in the center of the housing (12); a separator (44, and Col. 5, lines 44-50) which is in contact with the heat media bed (54)

and the lower section isolated by the inlet chamber (32); and a rotor (40) disposed within the distribution cylinder (38). Chen fails to disclose a rotor consists of a rotor cylinder having multiple distribution wings (55, 56), a rotor cover (50) surrounding the distribution wings (55, 56) and outlet hole (31c) connected to the outlet duct (34). Inuki teaches the distribution wings (55, 56) aid in supporting the rotor structure and distributing the gas stream (Col. 6, lines 37-44). Thus, it would have been obvious in view of Inuki to one having ordinary skill in the art to modify the rotor of Chen with a rotor having distribution wings as taught by Inuki in order to provide a means for supporting the rotor and a means for distributing the gas stream. Regarding claim 2, Chen discloses a catalyst bed (48 or 52) is disposed circumferentially above the heat media bed (50 or 54) (Col. 6, lines 46-58). Regarding claim 3, Chen discloses the separator (44) consists of a cylindrical outer wall which fits to the inner wall of the housing (12) and is divided into multiple cells by isolating plates (44). Regarding claim 5, Inuki shows the distribution wings (55, 56) having an upper (31a) and lower (51a) outlet hole and approximately one half of the distribution wings (55, 56) are covered by a rotor cover (50) as shown on Fig. 4A. Regarding claim 6, Chen discloses a separate purge section (34) is disposed within the rotor between the influent distribution zone (32) and the effluent zone (36 and Fig. 3). Regarding claim 7, Chen discloses the dividing plates 44 radially spanning the RCO 40 (as best understood by examiner) constitutes the vertical partition of the claimed invention. Regarding claims 8 and 9, Chen discloses the dividing plates 44 are sealed either pneumatically, hydraulically,

physically or other methods known in the art including Teflon, spring devices or O-rings (Col. 5, lines 50-540.

Response to Arguments

Applicant's arguments filed 5/6/05 have been fully considered but they are not persuasive. Applicant's argument with respect to the regenerative oxidizer of Inuki is different than the claimed invention particularly the exhaust gas passes "from the exterior of the rotor 50", Examiner respectfully disagrees. Inuki teaches the rotor 50 has distribution wings 55 and 56 (Col. 6, lines 37-44) to facilitate in supporting the rotor structure and distributing the gas as shown in Figures 4A and 4B. The exhaust gas is fed thru the rotor and thru distribution wings 55 and 56. Thus, it would have been obvious in view of Inuki to one having ordinary skill in the art to modify the rotor of Chen with a rotor having distribution wings as taught by Inuki in order to provide a means for supporting the rotor and a means for distributing the exhaust gas.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the


shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong
July 10, 2005
TD



Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700